AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

Listing of Claims:

1 -3 (Cancelled)

4. (Currently Amended): ~~A computer-readable medium having stored thereon a plurality of data structures~~In a computing environment for use in computer implemented modeling, a method of creating a model element, the method comprising:

selecting a notation ~~data structure~~ from a plurality of notations, wherein each of the notations among the plurality of notations comprise a visual representation which may be used as a visual representation of a model element, and wherein each notation comprises one or more ~~having a set of at least one~~ interfaces ~~for accessing a plurality of methods therein~~that provide information about capabilities of the notation for use in associating a notation with a semantic, but wherein each notation is independent of any semantic; ~~and~~

selecting a semantic, ~~data structure separate~~ the semantic providing a meaning of a model element in a modeling environment, and the semantic being independent from ~~the~~ any notation ~~data structure~~, the semantic ~~data structure~~ having ~~a set of at least~~ one or more interfaces for accessing ~~a plurality of methods therein, the semantic data structure being associated with the notation data structure to provide a model element~~information about the semantic defining requirements of a notation that is to be associated with the selected semantic; and

associating the selected notation with the selected semantic by associating the capabilities of the notation with the requirements of the semantic.

5. (Currently Amended): The ~~computer-readable medium~~method of claim 4 wherein the notation ~~data structure~~ comprises a notation object and the semantic ~~data structure~~ comprises a semantic object, and wherein a paradigm server associates the notation object with the semantic object to provide the model element.

6. (Currently Amended): The ~~computer-readable medium~~method of claim 5 wherein the paradigm server validates that the semantic object can be associated with the notation object by validating through the notation object and semantic object interfaces that the notation object has capabilities to meet the requirements of the semantic object.

7. (Currently Amended): The ~~computer-readable medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data structure~~ provides information identifying a library of notations to which the notation ~~data structure~~ belongs.

8. (Currently Amended): The ~~computer-readable medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data structure~~ provides type information corresponding to the notation ~~data structure~~.

9. (Currently Amended): The ~~computer-readable medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data structure~~ provides subtype information corresponding to the notation ~~data structure~~.

10. (Currently Amended): The ~~computer-readable medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data structure~~ provides a name of the notation ~~data structure~~.

11. (Currently Amended): The ~~computer-readable medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data structure~~ provides information indicative of whether the notation ~~data structure~~ is capable of being resized.

12. (Currently Amended): The ~~computer-readable medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data structure~~ provides information indicative of whether the notation is capable of visually indicating selected and unselected states.

13. (Currently Amended): The ~~computer-readable-medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data-structure~~ provides information indicative of whether the notation is capable of being in a visible or a hidden state.

14. (Currently Amended): The ~~computer-readable-medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data-structure~~ provides information indicative of whether the notation is capable of visually indicating hover-related states.

15. (Currently Amended): The ~~computer-readable-medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data-structure~~ provides information indicative of whether the notation is capable of visually indicating attach-points at which arcs can connect.

16. (Currently Amended): The ~~computer-readable-medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data-structure~~ provides information indicative of a minimum and maximum size of the notation.

17. (Currently Amended): The ~~computer-readable-medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data-structure~~ provides information indicative of whether the notation is capable of zooming operations.

18. (Currently Amended): The ~~computer-readable-medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data-structure~~ provides information indicative of supported color depths.

19. (Currently Amended): The ~~computer-readable-medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data-structure~~ provides information indicative of an iconic representation.

20. (Currently Amended): The ~~computer-readable-medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data-structure~~ provides information indicative of whether the notation is capable of doing animations.

21. (Currently Amended): The ~~computer-readable medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the notation ~~data structure~~ provides information indicative of a number of states that the notation can visually indicate.

22. (Currently Amended): The ~~computer-readable medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the semantic ~~data structure~~ provides information identifying a library of semantics to which the semantic ~~data structure~~ belongs.

23. (Currently Amended): The ~~computer-readable medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the semantic ~~data structure~~ provides type information corresponding to the semantic ~~data structure~~.

24. (Currently Amended): The ~~computer-readable medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the semantic ~~data structure~~ provides subtype information corresponding to the semantic ~~data structure~~.

25. (Currently Amended): The ~~computer-readable medium~~method of claim 4 wherein one of the ~~methods~~interfaces of the semantic ~~data structure~~ provides a name of the semantic ~~data structure~~.

26. (Cancelled)

27. (Currently Amended): The ~~computer-readable medium~~method of claim ~~26~~4 wherein one requirement of the ~~set~~semantic requires that the notation ~~data structure~~ be resizable.

28. (Currently Amended): The ~~computer-readable medium~~method of claim ~~26~~4 wherein one requirement of the ~~set~~semantic requires that the notation ~~data structure~~ be capable of visually indicating a selected or an unselected state.

29. (Currently Amended): The ~~computer-readable-medium~~method of claim ~~26~~4 wherein one requirement of the ~~set~~semantic requires that the notation ~~data-structure~~ be capable of being in a visible or a hidden state.

30. (Currently Amended): The ~~computer-readable-medium~~method of claim ~~26~~4 wherein one requirement of the ~~set~~semantic requires that the notation ~~data-structure~~ be capable of visually indicating at least two distinct hover-related states.

31. (Currently Amended): The ~~computer-readable-medium~~method of claim ~~26~~4 wherein one requirement of the ~~set~~semantic requires that the notation ~~data-structure~~ have a number of attach-points at which arcs can connect.

32. (Currently Amended): The ~~computer-readable-medium~~method of claim ~~26~~4 wherein one requirement of the ~~set~~semantic requires that the notation ~~data-structure~~ support a color depth.

33. (Currently Amended): The ~~computer-readable-medium~~method of claim ~~26~~4 wherein one requirement of the ~~set~~semantic requires that the notation ~~data-structure~~ be capable of doing animations.

34. (Currently Amended): The ~~computer-readable-medium~~method of claim ~~26~~4 wherein one requirement of the ~~set~~semantic requires that the notation ~~data-structure~~ have a number of states.

35. (Currently Amended): The ~~computer-readable-medium~~method of claim 4 wherein the model element corresponds to a node, and wherein the node includes at least one method to determine the notation ~~data-structure~~ and semantic ~~data-structure~~ and corresponding thereto.

36. (Currently Amended): The ~~computer-readable-medium~~method of claim 4 wherein the model element corresponds to an arc, and wherein the arc includes at least one method to determine the notation ~~data-structure~~ and semantic ~~data-structure~~ and corresponding thereto.

37. (Currently Amended): A system, comprising:

a notation server, wherein the notation server comprises a plurality of notations, wherein each of the notations among the plurality of notations comprise a visual representation which may be used as a visual representation of a model element, and wherein each notation comprises one or more interfaces that provide information about capabilities of the notation for use in associating a notation with a semantic, but wherein each notation is independent of any semantic~~comprising a representation of a model element in at least one modeling environment, the notation including an interface configured to provide access to methods therein~~;

a semantic server, wherein the semantic server comprises one or more semanitcs, each semantic providing a meaning of a model element in a modeling environment, and the semantic being independent from any notation, the semantic having one or more interfaces for accessing information about the semantic defining requirements of a notation that is to be associated with the selected semantic~~separate from the notation and comprising a meaning indicative of behavior of a model element in at least one modeling environment, the semantic including an interface configured to provide access to methods therein~~; and

a paradigm server, the server coupled to the notation server and the semantic server connected to a modeling environment and configured to access the ~~methods~~ interfaces of the notation and the ~~methods~~ interfaces of the semantic~~via their respective interfaces~~, and further configured to enable a determination as to whether the paradigm server, notation and semantic are each compatible, and if they are compatible, to associate the notation with the semantic by associating capabilities of the notation with requirements of the semantic to provide a model element in the modeling environment.

38. (Currently Amended): The system of claim 37 wherein the notation server comprises an ActiveX control and the semantic server comprises ~~each comprise an objecta~~ COM class server.

39-47 (Cancelled)

48. (Currently Amended): A computer-readable medium having stored thereon a ~~plurality of data structures, comprising~~computer executable instructions for performing the following:

selecting a notation from a plurality of notations, wherein each of the notations among the plurality of notations comprise a visual representation which may be used as a visual representation of a model element, and wherein each notation comprises one or more interfaces that provide information about capabilities of the notation for use in associating a notation with a semantic, but wherein each notation is independent of any semantic;

selecting a semantic, the semantic providing a meaning of a model element in a modeling environment, and the semantic being independent from any notation, the semantic having one or more interfaces for accessing information about the semantic defining requirements of a notation that is to be associated with the selected semantic; and

associating the selected notation with the selected semantic by associating the capabilities of the notation with the requirements of the semantic.

~~a notation data structure from at least a first provider having a set of at least one interface for accessing a plurality of methods therein; and~~

~~a semantic data structure indicative of behavior from at least a second provider, the semantic data structure separate from the notation data structure and having a set of at least one interface for accessing a plurality of methods therein, the semantic data structure from the at least second provider being associated with the notation data structure from the at least first provider to provide a model element.~~

49 - 51 (Cancelled)